

REMARKS

No claims have been amended, added or canceled. Therefore, claims 1-47 remain pending in the application. Reconsideration is respectfully requested in light of the following remarks.

Section 102(a) Rejection:

The Office Action rejected claims 1-7, 9-13, 16-23, 25-29, 31-39, 41-45 and 47 under 35 U.S.C. § 102(a) as being anticipated by Czerwinski, et al., “An Architecture for a Secure Service Discovery Service” (hereinafter, “Czerwinski”). Applicants respectfully traverse this rejection in light of the following remarks.

Regarding claim 1, contrary to the Examiner’s assertion, Czerwinski fails to teach requesting a capability credential to allow the client to access a portion of the first service’s capabilities, wherein said requesting a capability credential comprises the client indicating a set of desired capabilities. The Examiner cites passages in Czerwinski (Sections 3.3 and 3.4) that discuss the certificate authority and the capability manager of SDS. Czerwinski describes a secure Service Discovery Service (SDS) wherein a client requests a capability credential from a capability manager. However, a SDS client does not indicate a set of desired capabilities when requesting a capability credential. Instead, each service in the SDS system contacts the capability manager, and “specifies an access control list” including a list of principals, such as clients, allowed to access the service’s description (Czerwinski, section 3.4, paragraph 3). It is only after obtaining a capability credential from the CM that a client contacts a SDS Server to locate one or more services. The SDS server returns services that match the client’s query (Czerwinski, section 3.1, paragraph 5). The client presents the capability credential to the SDS server and the server only returns services to which the client has access based upon the capability credential obtained from the Capability Manager. Thus, a client is granted access to all or none of a service’s features based on whether that client is included in the service’s access control list. In other words, SDS services specify which clients can have access to

their respective services, but a SDS client does not indicate a set of desired capabilities when requesting a capability credential. The capability manager gives the client a capability credential that informs the SDS server of which services the client is able to access.

In response to the above argument, the Examiner, in the Response to Arguments section of the Final Office Action, states that “Czerwinski discloses a client contacts the CA and specifies the principal’s certificate that it is interested in,” again citing section 3.3 of Czerwinski. **However, a principal’s certificate in Czerwinski does not indicate a set of desired capabilities.** Instead, a principal’s certificate is a “public-key certificate that can be used to prove the component’s identity to all other components” (Czerwinski, section 2.4, paragraph 2). Thus, the certificates to which the Examiner is referring provide authentication within Czerwinski’s system and do not have anything to do with a client indicating a set of desired capabilities. Czerwinski teach that his system uses certificates “to authenticate the bindings between principals and their public keys (i.e., verifying the digital signatures used to establish the identities of SDS components)” (Czerwinski, section 3.3, paragraph 1).

Czerwinski’s client requesting a principal’s certificate is not the same as a requesting a capability credential where the client indicates a set of desired capabilities, as recited in claim 1. As noted above, Czerwinski’s certificates provide authentication, not any indication of a desired set of capabilities. Furthermore, the Examiner’s cited passage states that Czerwinski’s Certificate Authority provides a principal’s certificate *to a client*, and thus, even if Czerwinski’s certificates did indicate a set of desired capabilities, which they clearly don’t, the Examiner’s argument still would not provide for a client indicating a set of desired capabilities.

Thus, Czerwinski clearly fails to disclose a client requesting a capability credential wherein said requesting a capability credential comprises the client indicating a set of desired capabilities, as recited in claim 1. For at least the reasons above, the rejection of claim 1 is not supported by the prior art and removal thereof is respectfully

requested. Similar remarks as discussed above in regard to claim 1 apply to claims 17 and 33.

Regarding claim 2, the Examiner asserts that Czerwinski teaches that requesting a capability credential comprises the client sending a capability credential request message, wherein said capability credential request message comprises an identification of said first service and an indication of the set of desired capabilities. Applicants respectfully disagree with the Examiner's interpretation of Czerwinski. In fact, Czerwinski clearly fails to disclose a capability credential request message that comprises an identification of the first service. The Examiner's cited passages (sections 3.3 and 3.4) disclose how a client contacts a capability manager to obtain the client's capabilities, but neither of these passages describe a capability credential request message that comprises an indication of a service. In contrast, Czerwinski states that SDS services provide an access control list including a list of principals, such as clients, allowed to access the service's description (Czerwinski, section 3.4, paragraph 3). Czerwinski further states that the capability manager "then generates the appropriate capabilities and saves them for later distribution to the clients (Czerwinski, section 3.4, paragraph 3). Thus, rather than a client sending a capability credential request message that comprises an identification of the service, Czerwinski teaches that the identity of the client is matched against access control lists to determine which services the client is allowed to discover.

Additionally, Czerwinski fails to teach that the capability credential request message comprises an indication of the set of desired capabilities. As argued above regarding claim 1, Czerwinski's SDS clients do not indicate a desired set of capabilities when requesting a capability credential. Instead, they obtain a capability credential that allows the SDS server to return only those services that have specifically granted the client access (Czerwinski, section 3.1, paragraph 5). Therefore, any capability credential request message in SDS would not comprise an indication of a client's set of desired capabilities.

In response to the above arguments, the Examiner states, “Czerwinski discloses the first service, which is the SDS service, and the set of desired capabilities” citing section 3.1, paragraph 5, and section 6.1 of Czerwinski. However, the first cited passage describes how a client submits a query to the SDS service along with the client capabilities to search for “service descriptions that both match the query and are accessible to the user.” Czerwinski’s SDS service does not provide capability credentials to clients. Instead, as noted above, Czerwinski’s system includes a capability manager that distributes capabilities. A client submitting a query to an SDS service does not involve a capability credential request message. Section 6.1 of Czerwinski briefly describes the unique service names of both the Internet Domain Naming Service and Globe. However, this cited passage makes no mention of capability credentials, capability credential request messages, nor any indication of a set of desired capabilities. In fact, section 6.1 of Czerwinski is completely irrelevant to a capability credential request message comprising an identification of said first service and an indication of the set of desired capabilities, as recited in claim 2.

Thus, the rejection of claim 2 is not supported by the prior art and removal thereof is respectfully requested. Similar remarks as discussed above in regard to claim 2 apply to claims 18 and 34.

In regard to claim 3, contrary to the Examiner’s contention, Czerwinski fails to teach wherein said identification of said first service comprises a Universal Unique Identifier (UUID). The Examiner cites section 6.1 of Czerwinski, but this passage only states that a different discover service, Globe, uses unique object identifiers to identify services, but fails to disclose wherein a capability credential request message comprising an identification of a service wherein that identification of the service comprises a UUID. In contrast, as shown above regarding claim 2, Czerwinski teaches that clients do not identify a service when requesting a capability credential. Hence, any use of UUIDs, or “Globe unique object identifiers”, in SDS would not involve including a UUID as part of an identification of a service in a capability credential request message. Also, the Globe unique object identifiers in Czerwinski are not described as UUIDs. Czerwinski clearly

fails to teach wherein the identification of the first service comprises a Universal Unique Identifier (UUID).

In response to the above argument, the Examiner states, "Czerwinski discloses that the SDS is connected to the client through ARMI, which commonly uses UUID to identify the service" citing section 3.1, paragraph 5 and section 3.5.3 of Czerwinski. However, as noted above, a client in Czerwinski's system does not send a capability credential request message to an SDS service. Neither of the cited passages mention anything about, nor have anything to do with, capability credential request messages. Whether or not ARMI uses UUIDs to identify services does not disclose anything about the contents of a capability credential request message. The Examiner seems to be completely ignoring this limitation of Applicant's claims.

Furthermore, the Examiner has not established a proper case of anticipation because the teachings relied on by the Examiner are from separate works. Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim. *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 221 USPQ 481, 485 (Fed. Cir. 1984). The identical invention must be shown in as complete detail as is contained in the claims. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Although all the teachings cited by the Examiner are discussed in a single reference, the teachings are not part of a single method. For example, the portion of Czerwinski cited by the Examiner at section 6.1 is part of Czerwinski's discussion of related work and pertains to a different service discovery system (Globe) than the portion of Czerwinski cited by the Examiner at sections 3.3 and 3.4. To anticipate the claimed invention, Czerwinski must teach a single method that is identical to Applicants' claimed invention. Otherwise, Czerwinski cannot be said to teach the identical invention arranged as in Applicants' claims. Moreover, as discussed above, no combination of teachings in Czerwinski teaches Applicants' claimed invention.

Therefore, the rejection of claim 3 is not supported by the prior art and removal thereof is respectfully requested. Similar remarks as discussed above in regard to claim 3 apply to claims 19 and 35.

Regarding claim 4, contrary to the Examiner's assertion, Czerwinski fails to disclose wherein said capability credential request message is formatted in eXtensible Markup Language (XML). The Examiner cites section 3.1 of Czerwinski. However, this passage only describes how a client uses XML to build a service query that is matched against various service descriptions by the SDS server. As noted above, a SDS client must already have a capability credential obtained from a capability manager prior to querying a SDS server. Furthermore, Czerwinski only states that "[s]ervice descriptions and queries are specified in eXtensible Markup Language (XML)" (Czerwinski, section 1, paragraph 5). Neither service descriptions, nor service queries in SDS are capability credential request messages. Czerwinski fails to mention anything about using XML to format a capability credential request message. In fact, Czerwinski fails to describe the formatting of a capability credential request message at all. Thus, Czerwinski clearly fails to disclose wherein said capability credential request message is formatted in eXtensible Markup Language (XML).

In the Response to Arguments section of the Final Office Action, the Examiner response to the above argument by stating, "since the SDS query is in XML format and the query contains capabilities ... [t]herefore, the capabilities credential request message and the credential are communicated in XML format in order to make it easier to communicate." This argument by the Examiner is clearly flawed. Firstly, the very fact that an SDS query includes capabilities, as admitted by the Examiner, demonstrates that the SDS query cannot be a capability credential *request* message. Secondly, just because an SDS query is formatted in XML **does not imply** that anything else, including a capability credential request message, is formatted in XML. As noted above, Czerwinski fails to teach anything regarding the format of a capability credential request message. Thirdly, the Examiner is incorrect that a capability credential in SDS is communicated in XML format. Czerwinski teaches that "capabilities, like certificates, are securely

associated with a single principal, and only the clients possessing the appropriate private key can use them” (Czerwinski, section 3.4, paragraph 3). Czerwinski’s capabilities are clearly encrypted and not formatted in XML. The Examiner’s argument amounts to nothing more than merely speculation and unsubstantiated conclusion unsupported by any teaching or suggestion from Czerwinski.

The rejection of claim 4 is not supported by the prior art and removal thereof is respectfully requested. Similar remarks as discussed above in regard to claim 2 apply to claims 20 and 36.

Regarding claim 5, contrary to the Examiner’s assertion, Czerwinski fails to teach wherein said indication of the set of desired capabilities comprises an indication of said advertisement. Specifically, as noted above, capability credential request messages in SDS do not include an indication of desired capabilities. Furthermore, Czerwinski fails to disclose that the indication of the set of desired capabilities comprised in a capability credential request message comprises an indication of an advertisement for the first service. The Examiner’s cited passages (Czerwinski, sections 3.1, 3.3, and 34) describe SDS servers, certificate authority and capability managers. However, when requesting capability credentials, SDS clients do not include any indication of a desired set of service capabilities, as noted above. Furthermore, SDS clients do not include an indication of an advertisement for a service as part of an indication of a set of desired capabilities, when querying an SDS service. Instead, clients include desired capabilities in queries to locate service advertisements (e.g. service descriptions) (Czerwinski, section 3.1, paragraph 5).

In response to applicants argument above, the Examiner states, “Czerwinski discloses the advertisement domain contains the service announcements and contact information for the capability manager and certificate authority that are indication[s] of the desired capabilities” without citing any particular portion of Czerwinski. The Examiner is presumably referring to Czerwinski’s teachings regarding *domain advertisements*, as described in section 3.1, paragraph 1. However, Czerwinski

specifically states that each server sends domain advertisements that are authenticated messages “containing a list of domains that [the server] is responsible for” (Czerwinski, section 3.1, paragraph 1). Plus, contact information for a service is not an indication of desired capabilities. Instead, contact information merely provides a means of addressing (e.g. sending messages to) an entity in Czerwinski’s system. Thus, the domain advertisements do not include any indications of desired capabilities. Furthermore, the Examiner appears to be arguing that Czerwinski’s domain advertisements include indications of desired capabilities, which, even if true, which it is not, would be completely the opposite of what is recited in Applicants’ claim. Claim 5 recites, in part, wherein the indication of the set of desired capabilities comprises an indication of the advertisement. Thus, the Examiner’s contention that a domain advertisement includes indications of desired capabilities does not address applicants argument that Czerwinski fails to teach that an indication of the set of desired capabilities includes an indication of the advertisement.

Thus, for at least the reasons give above, the rejection of claim 5 is not supported by the prior art and removal thereof is respectfully requested. Similar remarks as discussed above in regard to claim 2 apply to claims 21 and 37.

Regarding claim 6, contrary to the Examiner’s assertion, Czerwinski fails to teach wherein said indication of said advertisement is said advertisement itself. The remarks above regarding claim 5 apply to claim 6 as well. Additionally, Czerwinski fails to teach including an advertisement for a service in a capability credential request message. The Examiner cites passages (Czerwinski, sections 3.1, 3.3, and 3.4) that describe SDS servers, capability mangers, and certificate authority. However, nowhere in the Examiner’s cited passage, nor anywhere else, does Czerwinski describe including an advertisement for a service as an indication of the advertisement in a capability credential request message. In contrast, Czerwinski teaches that a capability manager receives access control lists from services that include lists of principals that are allowed to access a service (Czerwinski, section 3.4). A SDS client does not include any indication of an advertisement for a service in a capability credential request message and certainly does

not include the advertisement itself as the indication of the advertisement in a capability credential request message. Instead, a SDS client receives from the capability manager a credential that is presented to a SDS server by the client. The SDS server then uses that credential to return only services that the client is allowed to access. (See Czerwinski, section 3.1, paragraph 5). Thus, Czerwinski clearly fails to teach wherein said indication of said advertisement is said advertisement itself. **Applicants note that the Examiner has failed to provide any rebuttal to Applicants' arguments regarding claim 6.**

Therefore, for at least the reasons given above, the rejection of claim 6 is not supported by the prior art and removal thereof is respectfully requested. Similar remarks as discussed above in regard to claim 6 apply to claims 22 and 38.

Regarding claim 7, the Examiner contends that Czerwinski discloses a method including wherein said indication of said advertisement is a Uniform Resource Identifier (URI) to said advertisement. Applicants respectfully disagree with the Examiner's interpretation of Czerwinski. The Examiner cites sections 3.1 and 3.4 of Czerwinski that describes the workings of SDS servers and SDS capability managers. Specifically the Examiner is relying upon the fact that in SDS "a capability proves the client is on ACL [access control list] by embedding the client's principal name and the service name" combined with Czerwinski's disclosure regarding the Globe services us globe unique object identifier. However, the teachings in Czerwinski that the Examiner is relying upon have nothing to do with a capability credential request message. In fact, the cited passage of Czerwinski does not mention anything regarding a capability credential request message nor does it describe using a URI to an advertisement as an indication of the advertisement in a capability credential request message. In contrast, Czerwinski teaches that a capability manager receives access control lists from services that include lists of principals that are allowed to access a service (Czerwinski, section 3.4). The service advertisements in SDS are sent by individual services and are collected by SDS servers to compare against client queries (Czerwinski, section 2.3). Nowhere does Czerwinski teach that a client includes a URI to an advertisement as an indication of the advertisement in a capability credential request message.

Furthermore, the Examiner has not established a proper case of anticipation because the teachings relied on by the Examiner are from separate works. Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim. *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 221 USPQ 481, 485 (Fed. Cir. 1984). The identical invention must be shown in as complete detail as is contained in the claims. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Although all the teachings cited by the Examiner are discussed in a single reference, the teachings are not part of a single method. For example, the portion of Czerwinski cited by the Examiner at section 6.1 pertains to a different service discovery system (DNS) than the portion of Czerwinski cited by the Examiner at sections 3.3 and 3.4. To anticipate the claimed invention, Czerwinski must teach a single method that is identical to Applicants' claimed invention. Otherwise, Czerwinski cannot be said to teach the identical invention arranged as in Applicants' claims. Moreover, as discussed above, no combination of teachings in Czerwinski teaches Applicants' claimed invention.

Applicants note that the Examiner has failed to provide any rebuttal to Applicants' arguments regarding claim 7.

Thus, the rejection of claim 7 is not supported by the prior art and removal thereof is respectfully requested. Similar remarks as discussed above in regard to claim 7 apply to claims 23 and 39.

Section 103(a) Rejections:

The Office Action rejected claims 8, 24 and 40 under 35 U.S.C. § 103(a) as being unpatentable over Czerwinski in view of Vacon et al. U.S. Patent 5,227,778, hereinafter "Vacon"). Applicants respectfully traverse this rejection in light of the following remarks.

Regarding claim 8, contrary to the Examiner's assertion, Czerwinski in view of Vacon fails to teach wherein the indication of the advertisement in the capability credential request message is a version of the advertisement edited to describe only the set of desired capabilities. As described herein above, Czerwinski does not teach the use of a capability credential request message that includes an indication of an advertisement. The Examiner cites a passage in Vacon that describes how network servers use multi-cast request messages to locate services that match a client's request. The Examiner is relying upon Vacon's teaching that a server includes identification, by function, of the requested service in the multi-cast request message (Vacon column 2, lines 1-5). However, when a server is sending a multi-cast request message including a desired service, it is not sending a *capability credential request message*. Instead, it is a multi-case request message to which all services providing the desired service reply (Vacon, column 5, lines 23-51).

Further, a server in Vacon's system does not include a version of an advertisement edited to describe only a set of desired capabilities in the multi-cast request message. Instead, Vacon clearly teaches that a server saves only the network address of the service and discards the remainder of the service advertisement (Vacon, column 2, lines 34-46). Thus, under Vacon, the service advertisement is not even saved, much less edited to describe only a set of desired capabilities and included in a capability credential request message.

Additionally, the Examiner's proposed combination of Czerwinski in view of Vacon would not result in a system that includes wherein the indication of the advertisement in the capability credential request message is a version of the advertisement edited to describe only the set of desired capabilities. In fact, such a combination would result in a system where the SDS servers taught by Czerwinski send multi-cast request messages, including an indication of the desired service, to find services that match a client's needs. However, since, as noted above, neither Czerwinski nor Vacon, discloses a *capability credential request message* including an indication of an advertisement for a service, a combination of Czerwinski and Vacon would also not

include a capability credential request message including an indication of an advertisement, wherein the indication of the advertisement is a version of the advertisement edited to described only the set of desired capabilities. **Applicants note that the Examiner has failed to provide any rebuttal to Applicants' arguments regarding claim 8.**

Thus, the rejection of claim 8 is not supported by the prior art and removal thereof is respectfully requested. Similar remarks as discussed above in regard to claim 8 apply to claims 24 and 40.

The Office Action rejected claims 14, 15, 30 and 46 under 35 U.S.C. § 103(a) as being unpatentable over Czerwinski in view of Johnson et al. (U.S. Patent 5,560,008) (hereinafter "Johnson"). Applicants respectfully traverse the rejection of these claims for at least the reasons given above regarding their respective independent claims.

In regard to the rejections under both sections 102(a) and 103(a), Applicants also assert that numerous ones of the dependent claims recite further distinctions over the cited art. However, since the rejection has been shown to be unsupported for the independent claims, a further discussion in regard to the dependent claims is not necessary at this time.

Information Disclosure Statement:

Applicants note that an Information Disclosure Statement with accompanying Form PTO-1449 was submitted on February 8, 2005. Applicants request the Examiner to carefully consider the listed references and return a copy of the signed and initialed Form PTO-1449 from this statement.

CONCLUSION

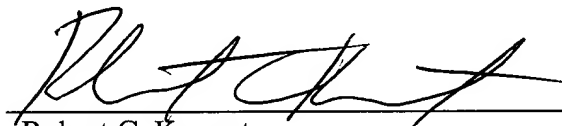
Applicants submit the application is in condition for allowance, and an early notice to that effect is requested.

If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5181-70400/RCK.

Also enclosed herewith are the following items:

- ☒ Return Receipt Postcard
- ☐ Petition for Extension of Time
- ☐ Notice of Change of Address
- ☐ Other:

Respectfully submitted,



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